# **MEETS Usage Statistics**

## **Table of Contents**

| MEETS Usage Statistics                   | 1  |
|--|----|
| Overview                                 | 1  |
| Notes                                    | 2  |
| Statistics                               | 2  |
| Daily Quota                              | 3  |
| Timeframe Options                        | 3  |
| All time                                 | 3  |
| Yearly / Monthly                         | 3  |
| Custom                                   | 3  |
| Views                                    | 3  |
| Aggregate                                | 3  |
| Detailed                                 | 3  |
| Statistic                                | 4  |
| At a glance                              | 4  |
| Users                                    | 4  |
| Hosts                                    | 5  |
| Courses with users                       | 6  |
| Courses with events                      | 7  |
| Past events                              | 7  |
| Ongoing events                           | 9  |
| Future events                            | 10 |
| Recording files                          | 11 |
| Recording access                         | 12 |
| Browsers                                 | 13 |
| Conferencing services for past events    |    |
| Conferencing services for ongoing events |    |
| Conferencing services for future events  | 14 |
| Printing                                 | 15 |
| Exporting                                | 15 |
| CSV                                      | 15 |
| JSON                                     | 16 |
| XML                                      | 17 |

## Overview

CirQlive's Media-Enhanced Education & Training Suite (MEETS) provides administrators with the ability to track system usage and understand overall usage of the platform. The Usage Statistics include reviewing which features are being used, and which aren't, details about past events and recordings, a view of the present state of active events, an overview of teachers and students usage and which platforms users are using.

Utilizing these statistics can assist in improving the performance of online education and training being offered by your organization.

This documentation is provided so administrators can better understand what each statistic means, and offers some suggestions on how to use it to improve your organization's teaching capabilities. Using some of the more complex capabilities are also detailed.

## Notes

While MEETS aims to provide the best statistics it can offer, it is important to be aware of the following notes.

- Many of the statistics offered are based off of tracking certain kinds of usage. MEETS has not been tracking every piece of information since its inception, new features have been added over the course of MEETS development. Therefore, historical information of certain details can be missing. For example, MEETS did not track when users visited a course until a 2015 release. Clients who have been using MEETS prior to this point in time will see a gap in user course participation that may have occurred before this.
- Most of the provided usage statistics have options to limit the details to those that occurred between a certain time frame. This time frame applies to the main details being viewed, but not necessarily to some auxiliary information being offered. For example, when viewing courses with users that participated within a particular time frame, auxiliary information regarding the roles of users in the course is also shown. MEETS does not track the dates when a user's role in a course may have changed, therefore, the information regarding user roles is based on what it is currently. If a user used to be a student in a course, but later on became a teacher, when viewing their older participation, they will be counted as a teacher.
  - MEETS aims to make past information more reliable by saving each past monthly and yearly report when it is first generated. Subsequently reviewing an older report will then contain auxiliary information which was also accurate at the time the report was generated in the past. However, when asking MEETS to calculate a report using a custom time frame, this calculation will be performed live. Therefore, a custom calculation which is computed using the same time frame as a monthly or yearly report may show some discrepancy regarding the auxiliary information.
- MEETS internally uses <u>UTC</u> in determining when something occurred, and statistics for a specific time frame will be based on this time zone. MEETS however, allows administrators to view the time something occurred at using the time zone of their choosing.

## **Statistics**

There are multiple statistics to choose from, and several of them can be filtered according to different time ranges. Each statistic can also be filtered by the LTI Connection.

Each statistic will display a small description regarding what information it conveys.

The most recent calculated statistic will be displayed on the bottom half of your screen. The options chosen to calculate it will be indicated. The time range the statistic is calculated for will also be displayed.

## **Daily Quota**

Calculating statistics can consume considerably resources. In order to prevent abuse, there is a daily quota in place regarding how much processing power can be consumed for statistical generation. The quota resets every day at midnight UTC.

Fixed range statistics for information that occurred in the past is cached. Therefore these statistics can be displayed at any time, even if the daily quota has been reached. The statistic *At a glance* and the time range *Yearly / Monthly* for past years and months is always available.

## **Timeframe Options**

Most of the statistics offered allow you to choose which time frame to calculate them for.

## All time

Calculate the statistic starting from when it first became available, until the current moment.

## Yearly / Monthly

Choosing *Yearly / Monthly* will allow you to choose a specific year. For that year, you can see all statistics for each month side by side, as well as the year as a whole.

When viewing the current year, you have the option whether you want to also see the incomplete current month and the incomplete year to date. Computing these is unavailable if you have exceeded your daily quota.

### Custom

You can also calculate statistics during whichever time range you want. You can select two dates, and statistics will be calculated regarding information that occurred between the two dates.

However you cannot calculate statistics into the future, or prior to when the statistic in question first became available.

## Views

Most statistics will offer two kinds of views.

## Aggregate

In this view, presented right after the initial calculation, the overall information will be made available, containing aggregate data. It will include things like totals and percentages, possibly calculated a few different ways to offer maximum information regarding how MEETS is being used.

## Detailed

From most aggregate views, an option for further *details* is available. Here you can see the key information that went into the calculations for the aggregate information. The primary subject being calculated, for example, hosts, courses, users, or events will be enumerated, alongside relevant auxiliary information.

## Statistic

The different statistical calculations to choose from:

## At a glance

This statistic provides an overview of the all time use of the MEETS platform. Other than filtering by specific LTI connections, there are no filtering options. It summarizes the basic data from the other statistics into a single view.

Suggested uses:

- Getting an overview of MEETS usage.
- Seeing how over time MEETS accumulates more usage.

#### Users

This statistic provides information regarding users which participated in courses in the chosen time frame.

Aggregate information:

- Amount of users Total amount of users that visited a course.
- Amount of users using reminders Of these users, the amount that have chosen to receive reminders.
- Percentage of users using reminders Of these users, the percent that have chosen to receive reminders.
- Amount of users using change notification Of these users, the amount that have chosen to receive change notification.
- Percentage of users using change notification Of these users, the percent that have chosen to receive change notification.
- Amount of users using itineraries Of these users, the amount that have chosen to receive daily or weekly itineraries.
- Percentage of users using itineraries Of these users, the percent that have chosen to receive daily or weekly itineraries.
- Amount of users using any event notification The combined amount of the previous three amounts.
- Percentage of users using any event notification The combined percentage of the previous three amounts.
- Amount of unique courses Amount of courses that were visited by users.
- Average amount of courses per user How many courses on average did each user participate in.
- Amount of course entries for all users combined Total course participation by users. This is equal to amount of unique courses multiplied by amount of users.

Detailed information:

- ID The MEETS user ID.
- First name The user's first name.
- Last name The user's last name.
- E-mail address The user's identity e-mail address.

- Uses Reminders Whether the user receives reminders.
- Uses Change Notification Whether the user receives change notification.
- Uses Itinerary Whether the user receives daily or weekly itineraries.
- Courses enrolled Amount of courses the user participated in.
- Courses as student Amount of courses the user participated in as a student.
- Courses as teacher Amount of courses the user participated in as a teacher.
- Courses as administrator Amount of courses the user participated in as an administrator.

#### Suggested uses:

- Determining how many users made use of a MEETS course in a given time frame.
- Seeing how participation changes over time or for different months of the year.
- Seeing what the average user course load is.
- Identifying users who are performing above or below average.
- Getting an idea of how receiving event notification plays a role in participation.
- Getting an idea of user/course activity.
- Reviewing individual user participation, and how and to what extent they participated.

#### Hosts

This statistic provides information regarding which hosts were active in a particular time frame. Activity is determined by the event schedule.

Aggregate information:

- Total amount of hosts A host can refer to either users who host events, or the web conferencing accounts that are used to host an event. If there is no distinction in your organization, then these three numbers will be the same. This number indicates the amount of unique user to web conferencing account combinations that were used.
- Individual users The amount of users who hosted an event.
- Individual conferencing accounts The amount of web conferencing accounts that were used to host an event.

Detailed information:

- User ID The MEETS user ID.
- Account ID The MEETS web conferencing account ID.
- Conferencing service The name of the web conferencing service.
- Conferencing service username The user name of the web conferencing account.
- First name The user's first name.
- Last name The user's last name.
- E-mail address The user's identity e-mail address.

- Determining how many hosts are active in a given time frame.
- Seeing how host activity changes over time or for different months of the year.
- Seeing the ratio of active users to host accounts.
- Reviewing individual user and account activity.

#### **Courses with users**

This statistic provides information regarding which courses were active when activity is measured by user participation. Sometimes even courses taught long ago will still have activity because users are using them to review older material, or because new users are watching their recordings.

Aggregate information:

- Amount of courses Amount of courses which were active.
- Amount of unique users Amount of users that were unique across courses.
- Amount of unique students Amount of students that were unique across courses.
- Amount of unique teachers Amount of teachers that were unique across courses.
- Amount of unique administrators Amount of administrators that were unique across courses.
- Average amount of users per course How many users on average did each course have.
- Average amount of students per course How many students on average did each course have.
- Average amount of teachers per course How many teachers on average did each course have.
- Average amount of administrators per course How many administrators on average did each course have.
- Amount of user entries for all courses combined Total user activity by courses. This is equal to amount of unique users multiplied by amount of courses.
- Amount of student entries for all courses combined Total student activity by courses. This is equal to amount of unique students multiplied by amount of courses.
- Amount of teacher entries for all courses combined Total teacher activity by courses. This is equal to amount of unique teachers multiplied by amount of courses.
- Amount of administrator entries for all courses combined Total administrator activity by courses. This is equal to amount of unique administrators multiplied by amount of courses.

#### Detailed information:

- ID The MEETS course ID.
- Name The name of the course.
- Users Amount of users in the course.
- Students Amount of students in the course.
- Teachers Amount of teachers in the course.
- Administrators Amount of administrators in the course.

- Determining how many MEETS courses were active in a given time frame.
- Seeing how activity changes over time or for different months of the year.
- Seeing the average activity of a course measured by different kinds of users.
- Getting a sense of user participation in courses currently being taught and past courses being utilized.
- Identifying courses whose participation is above or below average.
- Reviewing individual course popularity.

#### **Courses with events**

This statistic provides information regarding which courses were active when activity is measured by events.

Aggregate information:

- Amount of courses Amount of courses which were active.
- Amount of unique events Amount of events that were unique across courses.
- Average amount of events per course How many events on average did each course have.
- Amount of event entries for all courses combined Total event usage by courses. This is equal to amount of unique events multiplied by amount of courses.

#### Detailed information:

- ID The MEETS course ID.
- Name The name of the course.
- Events Amount of events in the course.

#### Suggested uses:

- Determining how many MEETS courses were active in a given time frame.
- Seeing how activity changes over time or for different months of the year.
- Seeing the average activity of a course.
- Identifying courses where the amount of events is above or below average.
- Reviewing individual course activity.

#### Past events

This statistic provides information regarding events which began in the past.

Aggregate information:

- Total amount of events Amount of events of any kind that are occured.
- Amount of unique hosts of events Amount of hosts who hosted an event.
- Average amount of events per host Amount of events each host has hosted on average.
- Average users per event Amount of users who attempted to join each event on average.
- Average authenticated guests per event Amount of guests who have authenticated who attempted to join each event on average.
- Average unauthenticated guests per event Amount of guests who have not authenticated who attempted to join each event on average.
- Total average per event Amount of participants of any kind who attempted to join each event on average.
- Total participants for all events Total amount of participants of any kind who attempted to join any event.
- Course events Amount of events that are specifically course-wide events that occurred.
- Amount of unique hosts of course events Amount of those who hosted course events.
- Average amount of course events per host Amount of course events each course host hosted.
- Average users per course event Amount of users who attempted to join each course event on average.

- Average authenticated guests per course event Amount of guests who have authenticated who attempted to join each course event on average.
- Average unauthenticated guests per course event Amount of guests who have not authenticated who attempted to join each course event on average.
- Total average per course event Amount of participants of any kind who attempted to join each course event on average.
- Total participants for all course events Total amount of participants of any kind who attempted to join any course event.
- Appointment events Amount of events that are specifically appointment events that occurred.
- Amount of unique hosts of appointment events Amount of those who hosted the appointment events.
- Average amount of appointment events per host Amount of appointment events each appointment host hosted.
- Average users per appointment event Amount of users who attempted to join each appointment event on average.
- Average authenticated guests per appointment event Amount of guests who have authenticated who attempted to join each appointment event on average.
- Average unauthenticated guests per appointment event Amount of guests who have not authenticated who attempted to join each appointment event on average.
- Total average per appointment event Amount of participants of any kind who attempted to join each appointment event on average.
- Total participants for all appointment events Total amount of participants of any kind who attempted to join any appointment event.

Detailed information:

- Event ID The MEETS event ID.
- Start Time The time the event was scheduled to begin.
- End Time The time the event was scheduled to end.
- Duration The scheduled duration of the event. Calculated by subtracting start time from end time.
- Name Name of the event.
- Type Type of the event. Course event or appointment event.
- Conferencing service The conferencing service which created the event.
- Host ID The MEETS user ID of the host.
- Host's first name The first name of the host.
- Host's last name The last name of the host.
- Host's e-mail address The e-mail address of the host.
- Amount of users via MEETS Amount of users who attempted to join directly via MEETS. Will be ? if this information is not available.
- Amount of guests authenticated via MEETS Amount of guests who authenticated themselves who attempted to join directly via MEETS. Will be ? if this information is not available.
- Amount of guests unauthenticated via MEETS Amount of guests who have not authenticated themselves who attempted to join directly via MEETS. The same person may

be counted more than once if they try joining from different devices, as they are not authenticated. Will be ? if this information is not available.

Suggested uses:

- Determining how many events, possibly of a particular type, that took place during a given time frame.
- Seeing how activity changes over time or for different months of the year.
- Seeing the average participation in each type of event.
- Getting a sense of the average activity of each kind of participant during a given time frame.
- Getting an idea regarding how much participation occurs during a given time frame.
- Identifying tutors or counselors who put in work, when they worked, how long they worked.
- Identifying those who were in multiple events simultaneously.
- Understanding how participants are joining events.
- Reviewing individual event activity.
- Identifying events whose participation was above or below average.

#### **Ongoing events**

This statistic provides information regarding events which began in the past and will end in the future.

Aggregate information:

- Total amount of events Amount of events of any kind that are currently active.
- Amount of unique hosts of events Amount of hosts currently hosting an event.
- Average amount of events per host Amount of events each host is currently hosting on average.
- Average users per event Amount of users who attempted to join each event on average.
- Average authenticated guests per event Amount of guests who have authenticated who attempted to join each event on average.
- Average unauthenticated guests per event Amount of guests who have not authenticated who attempted to join each event on average.
- Total average per event Amount of participants of any kind who attempted to join each event on average.
- Course events Amount of events that are specifically course-wide events that are currently active.
- Amount of unique hosts of course events Amount of those who are currently hosting course events.
- Average amount of course events per host Amount of course events each course host is currently hosting.
- Average users per course event Amount of users who attempted to join each course event on average.
- Average authenticated guests per course event Amount of guests who have authenticated who attempted to join each course event on average.
- Average unauthenticated guests per course event Amount of guests who have not authenticated who attempted to join each course event on average.
- Total average per course event Amount of participants of any kind who attempted to join each course event on average.

- Appointment events Amount of events that are specifically appointment events that are currently active.
- Amount of unique hosts of appointment events Amount of those who are currently hosting the appointment events.
- Average amount of appointment events per host Amount of appointment events each appointment host is currently hosting.
- Average users per appointment event Amount of users who attempted to join each appointment event on average.
- Average authenticated guests per appointment event Amount of guests who have authenticated who attempted to join each appointment event on average.
- Average unauthenticated guests per appointment event Amount of guests who have not authenticated who attempted to join each appointment event on average.
- Total average per appointment event Amount of participants of any kind who attempted to join each appointment event on average.

Detailed information:

- Event ID The MEETS event ID.
- Start Time The time the event was scheduled to begin.
- End Time The time the event is scheduled to end.
- Duration The scheduled duration of the event. Calculated by subtracting start time from end time.
- Name Name of the event.
- Type Type of the event. Course event or appointment event.
- Conferencing service The conferencing service which created the event.
- Host ID The MEETS user ID of the host.
- Host's first name The first name of the host.
- Host's last name The last name of the host.
- Host's e-mail address The e-mail address of the host.
- Amount of users via MEETS Amount of users who attempted to join directly via MEETS.
- Amount of guests authenticated via MEETS Amount of guests who authenticated themselves who attempted to join directly via MEETS.
- Amount of guests unauthenticated via MEETS Amount of guests who have not authenticated themselves who attempted to join directly via MEETS. The same person may be counted more than once if they try joining from different devices, as they are not authenticated.

Suggested uses:

- Getting a sense of the events currently taking place.
- Determining how much support staff is currently required.
- Identifying those who are currently in multiple events simultaneously.
- Getting a sense of how active each current event is.
- Understanding how participants are joining current events.

#### **Future events**

This statistic provides information regarding events which are scheduled to begin in the future.

Aggregate information:

- Total amount of events Amount of events of any kind that are scheduled to occur in the future.
- Amount of unique hosts of events Amount of those who will be hosting the events in the future.
- Average amount of events per host Amount of events each future host has on average.
- Course events Amount of events that are specifically course-wide events that are scheduled to occur in the future.
- Amount of unique hosts of course events Amount of those who will be hosting the course events in the future.
- Average amount of course events per host Amount of course events each future course host has on average.
- Appointment events Amount of events that are specifically appointment events that are scheduled to occur in the future.
- Amount of unique hosts of appointment events Amount of those who will be hosting the appointment events in the future.
- Average amount of appointment events per host Amount of appointment events each future appointment host has on average.

Detailed information:

- Event ID The MEETS event ID.
- Start Time The time the event is scheduled to begin.
- End Time The time the event is scheduled to end.
- Duration The scheduled duration of the event. Calculated by subtracting start time from end time.
- Name Name of the event.
- Type Type of the event. Course event or appointment event.
- Conferencing service The conferencing service which created the event.
- Host ID The MEETS user ID of the host.
- Host's first name The first name of the host.
- Host's last name The last name of the host.
- Host's e-mail address The e-mail address of the host.

Suggested uses:

- Ensuring events for a future semester is scheduled.
- Determining how much support staff to make available in the future, and when they're needed.

## **Recording files**

This statistic provides information regarding recording files created by web conferencing services which MEETS became aware of in a given time frame. Some organizations may be using an automated process which tracks these recording files, such as format conversion. In such situations, MEETS becomes aware of recordings shortly after the web conferencing service makes them available. In other instances, MEETS will not be aware of recordings unless users review a past event.

Aggregate information:

• Total amount of recording files — Amount of web conferencing recording files MEETS is aware of. This does not include files generated from the original web conferencing recording files.

Detailed information:

- ID The MEETS content ID.
- Name The name of the recording file.
- Conferencing service The conferencing service which created the file.
- Created When MEETS became aware of the file's creation.

Suggested uses:

- Tracking recordings being created and then utilized over time.
- Seeing how this changes over time or for different months in the year.
- Seeing when an individual web conferencing recording was first utilized.

#### **Recording access**

This statistic provides information regarding actively viewed recordings in a given time frame.

Aggregate information:

- Total amount of recordings Recording files, whether original to the conferencing service or derived from them that were accessed.
- Average users per recording Amount of users who accessed or viewed each recording on average.
- Average authenticated guests per recording Amount of guests who are authenticated who accessed or viewed each recording on average.
- Average unauthenticated guests per recording Amount of guests who are not authenticated who accessed or viewed each recording on average. An unauthenticated guest may be counted multiple times if they accessed recordings via different devices.
- Total average per recording Amount of viewers of any kind who accessed or viewed each recording on average.
- Amount of user views for all recordings combined Amount of viewership of recordings by user. This is equal to the amount of unique users multiplied by the total amount of recordings.
- Amount of authenticated guest views for all recordings combined Amount of viewership of recordings by guest who have authenticated. This is equal to the amount of unique authenticated guests multiplied by the total amount of recordings.
- Amount of unauthenticated guest views for all recordings combined Amount of viewership of recordings by guest who have not authenticated. This is equal to the amount of unauthenticated guests multiplied by the total amount of recordings.
- Total amount of views for all recordings combined Amount of viewership by users of any kind. This is equal to the amount of viewers of any kind multiplied by the total amount of recordings.

Detailed information:

• ID — The MEETS content ID of the recording or file.

- Name The primary name of the recording.
- Original created When the original version of this recording was first identified by MEETS.
- Created When this derived version of the recording was created by MEETS. Will be the same as above if this is the original recording file.
- Amount of users via MEETS Amount of users who accessed or viewed this recording via MEETS. Will be ? if this information is not available.
- Amount of authenticated guests via MEETS Amount of guests who have authenticated who accessed or viewed this recording via MEETS. Will be *?* if this information is not available.
- Amount of unauthenticated guests via MEETS Amount of guests who have not authenticated who accessed or viewed this recording via MEETS. Please note that an unauthenticated guest who accesses a recording with multiple devices will be counted more than once. Will be ? if this information is not available.

Suggested users:

- Determining how many recording files are accessed in a given time frame.
- Seeing how recording views changes over time or for different months of the year.
- Determining the average viewership each recording receives.
- Identifying recordings whose viewership is above or below average.
- Identifying how users are accessing recordings.
- Identifying old recordings which are still being viewed.

#### Browsers

This statistic provides information regarding the browsers, platforms, and methods used to access MEETS. The results are measured according to each unique user's <u>user agent</u> and its settings.

There are three primary statistics that will be available:

- Web Browser The web browser applications used to access MEETS.
- <u>Operating System</u> The platforms these web browser runs on.
- <u>Transport Layer Security</u> The <u>cryptography</u> protocol and <u>ciphers</u> used to by web browsers to access MEETS.

Each piece of information present can also provide additional version information.

Please note that it is possible for a web browser to lie about its own name and operating system it is running on. One application can claim it is another, or using some other version. CirQlive has determined that at least 10% of MEETS users have their <u>user agent</u> being spoofed. It's even possible for the number to be considerably larger. CirQlive can determine if a user agent is being spoofed if the browser accessing MEETS has capabilities not present in the software it is claiming to be using, but cannot accurately detect this is occurring in situations where the assessed capabilities are valid for the user agent being advertised. Therefore software details should not be seen as 100% accurate. Spoofing most often occurs where less popular software claims it is actually a more popular application or operating system, although it can occur in other cases as well. Therefore, less popular software and operating systems probably have slightly higher usage than is readily apparent.

- Identify how users are connecting to MEETS.
- Be aware of which platforms your organization uses and needs to support.
- See how platform usage changes over time.
- Determine if your organization may be making use of older technology you want to migrate away from.

#### **Conferencing services for past events**

This statistic provides information regarding conferencing services used for past events. This statistic is only useful if your organization uses more than a single conferencing service.

There are three primary statistics that will be available:

- Service for events The services used for any kind of event.
- Service for course events The services used specifically for course events.
- Service for appointment events The services used specifically for appointment events.

Suggested uses:

- Be aware of which conferencing services your organization uses and needs to support.
- See how conferencing service usage changes over time.
- See how conferencing service usage changed by event type.

#### **Conferencing services for ongoing events**

This statistic provides information regarding conferencing services used by events that are currently active. This statistic is only useful if your organization uses more than a single conferencing service.

There are three primary statistics that will be available:

- Service for events The services used for any kind of event.
- Service for course events The services used specifically for course events.
- Service for appointment events The services used specifically for appointment events.

Suggested uses:

- Be aware of which conferencing services you are using at the moment.
- Identify which support personal you may need available.

#### **Conferencing services for future events**

This statistic provides information regarding conferencing services that will be used by events in the future. This statistic is only useful if your organization uses more than a single conferencing service.

There are three primary statistics that will be available:

- Service for events The services used for any kind of event.
- Service for course events The services used specifically for course events.
- Service for appointment events The services used specifically for appointment events.

- Be aware of which conferencing services you intend to use in the future.
- Be aware of training you may need to provide to your staff.
- Identify which support personal you may need available in the future.

## Printing

Every statistical view offers a print button. This print button can be used to print the statistics itself to paper. On most platforms and browsers, you can also print to file. Most platforms/browsers support saving files to <u>PDF</u>, and some support other formats like <u>PostScript</u> or <u>XPS</u>.

However, not all browser capabilities for printing are equal:

- Some browsers cannot print wide tables without cutting off some columns in portrait mode. If your browser has this problem, use landscape mode for printing wide tables.
- Modern versions of Google Chrome and Mozilla Firefox have excellent printing capabilities, better than other browsers.
- Microsoft Edge generally does a decent job when printing. However some stylistic details will be dropped in some cases, such as centering aggregate data. If you want the printed data to look as close as possible to what you see on your screen, try a different browser.
- Mozilla Firefox, unlike other browsers, prints tables with the heading row appearing on every page, making it easier to review.

## Exporting

The detailed view for any particular statistic, where this view is available, offers an option to export the statistics to a file.

## CSV

The detailed view for a statistic can be exported as a <u>CSV</u> file. The format is nearly identical to that specified by <u>RFC 4180</u>, with one major exception, the separators used between fields is a tab (ASCII 9) instead of a comma (ASCII 44). The format chosen was selected for maximum compatibility across a large range of popular <u>spreadsheet</u> applications. The data contained within will be a copy of the data contained in the detailed view.

Many programs that support this format will automatically recognize it. In some cases though you may need to set some options.

Format:

- The file character encoding is <u>little-endian</u> <u>UTF-16</u>.
- The first row is a header row.
- Each field is enclosed between two double quotes and may contain any character. A double quote is escaped using a double double quote.
- Columns are separated by tabs.
- Rows are separated by carriage return, line feed.

Some compatible applications:

- <u>Apache OpenOffice</u> Calc
- <u>Calligra Sheets</u>, formerly KSpread. Use *Data -> Encoding: Unicode (UTF-16)*, Format -> *Delimiter: Tabulator*, Format -> *Textquota: "*.
- <u>Gnumeric</u>
- LibreOffice Calc
- <u>Microsoft Excel</u>

#### JSON

The detailed view can export a file containing a <u>JSON</u> object. The JSON object contains all the aggregate and detailed data for the current statistic.

Note: Some of the data that may appear in aggregate or detailed view is computed from other values, such as percentages of totals or durations between two timestamps. Such additional computed data will not be in the JSON object, it will need to be recomputed if you need it.

The JSON object will contain the following:

- aggregate *object* The aggregate statistics. The names in this object each represent a different field, for a list of fields for the statistic, see *fields -> aggregate*. The values for each statistic might be an *integer*, a *boolean*, or a *string*. It can also contain *null* if the information is unavailable or inapplicable.
- data *object* The detailed statistics. The names in this object each represent a different field, for a list of fields for the statistic, see *fields* -> *data*. The values for each statistic might be an *integer*, a *boolean*, or a *string*. It can also contain *null* if the information is unavailable or inapplicable.
- description *string* Description of the statistic.
- domain *string* The MEETS domain of the site the statistic was calculated for, for example *cirqlive.meets.cirqlive.com*.
- fields *object* The fields present for this statistic.
  - aggregate *object* The aggregate statistics fields. The contents will be specific to the statistic in question. Each name will be found in the aggregate statistic data. The value contains a *string* description of the field.
  - data *object* The detailed statistics. The contents will be specific to the statistic in question. Each name will be found in the detailed statistic data. The value contains a *string* description of the field.
- lti\_connection\_instance *object* Details regarding the LTI connection the statistic was created for.
  - id *integer* The LTI connection ID. Will be *null* if calculated for the site as a whole.
  - name *string* The LTI connection name. Will be *null* if calculated for the site as a whole.
- name *string* Name of the statistic.
- timeframe\_begin *integer* A <u>UNIX timestamp</u>. The beginning of the timeframe the statistic covers.
- timeframe\_end *integer* A UNIX timestamp. The end of the timeframe the statistic covers.

Sometimes the object will contain a sub-object named *valuemap*. If present, it contains a list of fields that contain integers to map to particular strings. Each field will be an *array* of *objects* contain *from* and *to*. For example:

```
"valuemap" :
{
  "id_conferencing_service" :
  [
   {
    "from" : 1,
```

```
"to" : "Webex Meetings"

},

{

"from" : 6,

"to" : "GoToMeeting"

}

]

}
```

In this example, when processing values of the field *id\_conferencing\_service*, 1 is mapped to *Webex Meetings*, and 6 is mapped to *GoToMeeting*.

## XML

The detailed view can export a file containing an <u>XML</u> document. The XML document contains all the aggregate and detailed data for the current statistic.

Important details:

- All data will be contained inside tags. XML attributes are not used.
- The top level tag is *statistic*.
- When the concept of an *array* is required, a tag will contain multiple children tags named *value*.
- Whenever information is unavailable or inapplicable, a self closing tag will be used.

Note: Some of the data that may appear in aggregate or detailed view is computed from other values, such as percentages of totals or durations between two timestamps. Such additional computed data will not be in the XML document, it will need to be recomputed if you need it.

The XML document's top level tag will contain the following:

- aggregate The aggregate statistics. Each child tag represents a different field, for a list of fields for the statistic, see *fields -> aggregate*. The contents of each child tag is its value.
- data The detailed statistics. The contents is an array, where each row contains child tags that represent the different fields, for a list of fields for the statistic, see *fields* -> *data*.
- description Description of the statistic.
- domain The MEETS domain of the site the statistic was calculated for, for example *cirqlive.meets.cirqlive.com*.
- fields The fields present for this statistic. Contains two sub tags:
  - aggregate The aggregate statistics fields. The contents will be specific to the statistic in question. Each child tag here will be found in the aggregate statistic data. The child tag contents contains a description of the field.
  - data The detailed statistics. The contents will be specific to the statistic in question. Each child tag will be found in the detailed statistic data. The value contains a description of the field.
- lti\_connection\_instance Details regarding the LTI connection the statistic was created for, with two sub tags:
  - id The LTI connection ID. Will be a self closing tag if calculated for the site as a whole.
  - name The LTI connection name. Will be a self closing tag if calculated for the site as a whole.
- name Name of the statistic.

- timeframe\_begin A <u>UNIX timestamp</u>. The beginning of the timeframe the statistic covers.
- timeframe\_end A UNIX timestamp. The end of the timeframe the statistic covers.

Sometimes there will be a tag present named *valuemap*. If present, it contains a list of fields that contain integers to map to particular strings. Each field will be an array of values to map. Each row contains *from* and *to*. For example:

```
<valuemap>
<id_conferencing_service>
<value>
<from>1</from>
<to>Webex Meetings</to>
</value>
<from>6</from>
<to>GoToMeeting</to>
</value>
</id_conferencing_service>
</valuemap>
```

In this example, when processing values of the field *id\_conferencing\_service*, 1 is mapped to *Webex Meetings*, and 6 is mapped to *GoToMeeting*.